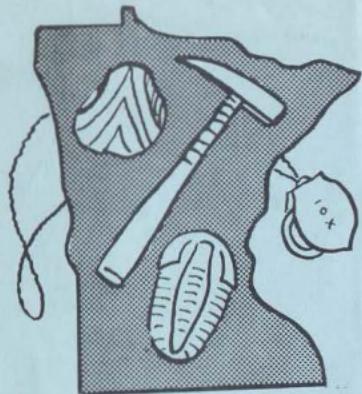


DEC 1979  
JAN, FEB 80



# NEWS

Geological Society of Minnesota

MINNEAPOLIS, MINNESOTA



FIRST CLASS



Ethel A. Shimek  
2745 Colfax Ave. So.  
Minneapolis, Minn. 55408

RETURN REQUESTED

DEC 4 REC'D

Barbara Gudmundson  
5505 25th Ave S  
Minneapolis  
Mn. 55417

P. 2

DEC., JAN., FEB., '80

## OFFICERS

PRESIDENT	Robert Handschin	2029 Edgerton Rd. St. Paul	774-1431
VICE PRES.	Barbara Gudmundson	5505 28th Av. S. Mpls.	762-7132
SECRETARY	Dwight Robinson	1405 Hamline Ave. N. St. Paul	612-3913
TREASURER	Patricia Wigton	3349 Pierce St. N. E. Mpls.	781-0733
DIRECTORS	Myrtle Fore	4358 30th Ave. S. Mpls.	722-5650
	Allen Lundgren	765 Redwood Lane New Brighton	633-5442
	Mari Jefferys	9509 5th Ave. S. Mpls.	888-1274
	Marlys Lowe	2206 Caroline Lane So. St. Paul	451-2822
	Henry Gangl	2925 Sumpter Ave. N. Mpls.	545-3912

## BOARD DOINGS - ELECTIONS

At the annual meeting Virginia Baker, Jay Hutchinson, and Elaine Fink were elected for a first term; Pat Wigton and Henry Gangl were re-elected for a second term on the Board.

Officers for 1980 were elected at the October meeting of the Board. They were: President, Barbara Gudmunson; Vice-President, Henry Gangl; Secretary, Robert Handschin; and Treasurer, Pat Wigton. The new officers will assume their duties in January.

## LECTURE SERIES TO CONTINUE

Dr. Alexander's lectures on recent explorations in space have been drawing large audiences. In addition we were treated to "Mars in Three D" A film presented by Dr. Elliot Levinthal, Stanford U.

Beginning in January, Dr. H.C. Pfankuch will hold forth on "Geology and Eco-Geology" for four lectures. Following that Dr. Peter Huddleston will give three talks on "Geological Principles, Old and Modern".

Our program committee is to be congratulated on preparing this excellent series.



## DIGGING INTO NATURE'S DEEP, DARK PAST

What do salt water fish scales, dinosaur bones and Vernal, Utah, have in common? The answer is a salvage fossil hunt conducted by Dr. Robert Sloan and four graduate students last summer.

Vernal, Utah is in the midst of a parched countryside where farmers struggle to raise corn, clover, wheat and alfalfa. Farmers and cattlemen lease some of the federal land that constitutes 66 per cent of the state. The rest is wilderness, left to crack and crumble under searing summer sun and the marrow-numbing winters. A walk across the banded countryside will take you through a billion years of evolution.

Dr. Robert Sloan and three of his students won a contract from the federal Bureau of Reclamation to prospect a 4-square-mile area that will be flooded. The resulting lake, to be called Red Fleet Reservoir after a high rock outcropping that resembles a battleship at full steam, will provide water to area farmland constantly teetering on the edge of drought. They were to collect fossil samples and learn what paleontological records will be lost when the area is flooded.

To Sloan and his colleagues, the history of life on earth is a vast, branching tree of evolution, and the imprint of unknown branches lay broken and scattered in the rocks around us.

"One way you can look at paleontology is as the study of a whole series of experiments in ecology that have already taken place," Sloan said. "That is the way I look at it."

Ultimately, some of the information found on field trips like this may be useful in prospecting for minerals, oil and uranium.

The main attraction for the scientists is having a chance to do what they like best.

Dr. Sloan is known to GSM members as a lecturer and field trip leader. In Eastern Montana he found the triceratops which stands in the Lobby of the Science Museum. His students on the trip were: Joe Hartman, 29, a top doctoral candidate, specializing in fresh-water mollusks; Martha Jordan, 38, wife of a University Professor and mother of 3, who is working on a master's degree in geology; and Laurie Dempsey, 25, graduate student working on her thesis on primeval fish.

Their camp was three tents on a hill a few hundred yards from Steinoker Lake, midway between Vernal and the Red Fleet Reservoir site. From this base they collected for a month. Most of the work is climbing, crawling up or down hills, hammering and chipping. For large pieces Sloan's old Scout International truck was invaluable, as it is equipped with a winch and is not fazed by rugged terrain.

The work on the dam is already in progress in the dusty, rocky valley near the camp - an area Sloan called 'Chaos' - a mythological place between heaven and hell.

*Cont. p.8*

# WELCOME NEW MEMBERS ...

## New Members

Peter Dille 924 17th Ave. SE #302 Minneapolis 55414	George F. Thornguest 1207 Adams St. NE Minneapolis 55413	Conrad Nelson 900 Centennial Place Minneapolis 55404
Sheldon Erickson & Connie Keldson 1108 4th St. SE #3 Minneapolis 55414	Roberta L. Salzberg 2119 Dudley Av. St. Paul 55108	Bonnie Mae Ryg 3124 W. 44th St Minneapolis 55410
Ronald Ezuck 1320 Lincoln Terrace NE Minneapolis 55421	Edward P. Fitzgerald 2004 Clear Av. St. Paul 55119	Gretchen Schneider 412 22nd Av. S. Minneapolis 55455
Bob Ferderer 440 E. Hoyt Av. St. Paul 55101	Timothy Jay Moenck 412 22nd Av. S. #331 Minneapolis 55455	Barbara and Gerald West 3034 Eighth Av. N. Anoka 55303
Virginia Holte 3525 Irving Av. S. Minneapolis 55408	Renee Zurn Comstock Hall #412E 180 SE Delaware St. Minneapolis 55414	Ralph & Ann Chantry 16508 Swede Hill Drive Afton 55001
Tina Lindsay 180 Montrose Pl. St. Paul 55101	Paul Janke 9056 Kimbro Av. S. Cottage Grove 55016	Cynthia Nelson 3215 Columbus Av. S. Minneapolis 55407
Nicholas & Virginia Puzak 44 Clarence Av. SE Minneapolis 55414	Dean Lokken 1823 15th Av. S. Minneapolis 55404	
Frederic & Virginia Rosenberg 4525 Drexel Av. S. Edina 55424	H. O. & Georgette Pfannkuch 2358 Bourne Av. St. Paul 55108	
Dick & Eva Selander 5129 29th Av. S. Minneapolis 55417		



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GEOLOGY IS A "DOWN-TO-EARTH" SUBJECT!

## In Memoriam

Martha Peterson died on November 4 at the age of 88. She was alert and active all the while until she just didn't wake up one day. A GSM member from the late '40's, she served on the Board, Membership chair, Hospitality, Exhibits among others.

She was responsible for a number of innovations: starting a booth at the State fair, selecting the excellent location we now have in the Education building. She also got a class started in basics of geology with Richard Bartels as instructor. The class was the forerunner of the labs.

Martha grew up on a farm in western Minnesota, attended Augsburg College and U of M where she earned a degree in Home Economics. She taught in the Minneapolis public schools for many years.

We were lucky to have her in our midst and will miss her.

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## CHANGE OF ADDRESS

Sophia Wojtysiac  
3736 Bloomington Av. S.  
Minneapolis 55407

Dr. J. S. Lewis  
1190 Grand Av. Apt 4  
San Diego, Cal 92109

Rodney M. & Peggy Lynn  
Nerdahl  
1178 Englewood Av.  
St. Paul 55104

Leone Knox  
Mrs. Mary Ann Knox  
Rte. #1-A Box 9  
Fischer, Minn, 56725

Pat Lewis is a former president,  
board member and served on the  
program committee.

## SPECIAL EVENT

The National Geographic for November 1979 article on Galapagos II Was about the deep sea explorations recently conducted.

Topics included: sea floor exploration, strange world without sun, mid-oceanic ridge in Pacific, life in the deep, such as bacteria, clams worms, lava lakes and frozen lava pillars, minerals erupting at hot spots containing iron, zinc, and copper sulfides.

A film will be sired on Public Broadcasting Service sometime in January. Channel 2 people did not know whether they would show it. So, watch for it.

## REMINDER ...

Membership dues for 1980 may be sent to Marjorie Mo Gladery, Rte.1 Box 17F, Elko, Minn. 55108, or may be paid at the lecture. Fees are: Adults - \$7.00, Husband and wife - \$10.00, Students - \$2.00.



P.C.

GEOLOGICAL SOCIETY OF MINNESOTA

ANNUAL FINANCIAL STATEMENT

12-31-77 to 12-31-78

I. CURRENT OPERATIONS

<u>INCOME</u>	
Dues for 1978	\$426.00
1979	<u>538.00</u>
	\$ 964.00
Coffee	50.48
Misc.	12.00
Operating Income	\$1,026.48
	\$1,026.48
<u>EXPENSE</u>	
Lectures: Fees Paid	\$480.00
Printed Programs	96.30
	<u>\$576.30</u>
	576.30
Lab Fee Guarantee	24.00
June Field Trip: rec'd	90.00
Paid Out	90.00
	<u>0.00</u>
	0.00
Newsletter	284.97
Membership: postage	31.58
1978 Roster	53.90
	<u>85.48</u>
	85.48
Spring Banquet:	473.08
Collected	450.00
	<u>23.08</u>
	23.08
Annual Meeting	0.00
Bank Costs	18.95
Misc.	29.96
Operating Expense	\$1,042.74
	\$1,042.74

NET CURRENT OPERATIONS (deficit) \$ -16.26

II. PUBLIC SERVICE PROJECTS

Expenses	\$ 520.94
Less: interest from savings	<u>-242.16</u>
Net Public Expense	\$ 278.78
	\$ 278.78
Checking account balance: 12-31-78	\$ 32.44
Savings Account Balances 12-31-78:	
Account #52-106454	370.67
Account #56-106456	<u>3,403.20</u>
TOTAL	\$3,773.87
GRANT TOTAL	\$3,806.31

## GSM GIVES WEBERS CAMERA

Dr. Gerald Webers of Macalester College left November 5th for New Zealand and the Antarctic, with a gift from G.S.M. members to help with his explorations there. At the suggestion of Mary Kimball that we assist Gerry, the Board voted to find out what he might need. It turned out that he needed a polaroid camera for which there were no funds available. He planned to use it to develop on-the-spot photos for his notebook, to supplement or take the place of field sketches. Dr. Webers was happy to get the polaroid camera best suited for his use in freezing temperatures, together with an ample supply of film.

Webers is heading the major Antarctic expedition of the year. (Story was in last Newsletter.) Over the years Gerry has given many GSM lectures, conducted GSM lab sessions and led our field trips. He has always been most generous with us. So it is with a feeling of gratitude that many have contributed.

Up to now 38 members have donated \$200.

Thanks to all who have responded, we are happy to have a chance to participate in this small way in the expedition.

### Donors:

Allan & Barbara Lundgren  
Mary Kimball  
Henry Gangl,  
Mrs. Helen Woodward  
Calvin Alexander  
Eva O'Leary  
John Podelinsky,  
Ronald J. Ezuck  
Bob & Marcia Gunville  
Tina Lindsay  
Alec & Marlys Lowe  
Cec MacDonald  
Marjorie McGladrey  
Mary O'Connor  
Nicholas Puzak  
Frederic Rosenberg  
John Snell  
Bernice Tepel

George and Goldie Jonnson  
Don and Betty Wheeler  
Charles & Dorothy Howard  
Jay Hutchinson  
Ellen Olson  
Grace Benz  
Fred & Olga Hallberg  
Dr. Valentine O'Malley  
Mel & Ida Olsen  
Fred Bradford  
Ann Jaworski  
Irene Jaworski  
Rodney & Peggy Nerdahl  
Bill Miller  
Dr. Harold Harbo  
Samuel B. Mayo  
Michael & Cora Vaclavek  
Bob & Emilie Handschin  
Myrtle & Earl Fore  
Ruth Brown

## NATURE'S PAST CONTINUED ...

One may ask: What really is accomplished as a result of such a study? How did sea shells get on top of a mountain? The gaps in present knowledge are slowly being filled. The answer is that nothing is permanent; earth is dynamic, constantly and slowly changing.

The dating of rocks and strata, correlating them with those in different parts of the world, is one important result. On top of a cracked clay hill Joe Hartman was collecting rocks shaped like clams and snails. Meanwhile Martha Jordan and Laurie Dempsey were wandering over the hill, dropping a quarter meter square frame on the rock and counting the clams, taking a census.

The clams in Vernal Area are the same as those found in England. If lab work back in Minneapolis bears out findings in the field, Jordan will have strengthened evidence that Jurassic Period environments were similar in Utah and England.

Improved dating would be important to the search for minerals and oil.

On the side of a hill where a winding road leads toward a dam that will hold the waters of the Red Fleet Reservoir, the group was looking for fish scales. You can tell from a fish scale what kind of fish lived here 100 million years ago when this was a shallow sea. The rock was shale, a layer a couple of feet thick. Above it was a layer of volcanic ash that will tell exactly the age of the scales.

In this area Sloan found a complete skeleton of a fish - the first vertebrate found on the trip.

In geology there is something for everyone.

Compiled from an article in Tribune, Sept. 29, 1979



Assistants: Bob Handschin, Ellen Biermeier and Helen Anderson typing; James Erickson, artist; Ann and Irene Jworski, Mailing.

Drill shaft through strata →

